

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 78-69

NPDES PERMIT NO. CA0037940

WASTE DISCHARGE REQUIREMENTS FOR:

CONTRA COSTA COUNTY SANITATION DISTRICT NO. 7-A  
SHORE ACRES SEWAGE TREATMENT PLANT  
CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter called the Board, finds that:

1. Contra Costa County Sanitation District No. 7-A, hereinafter called the discharger, submitted a report of waste discharge for renewal of NPDES Permit No. CA0037940.
2. The Board originally issued this NPDES Permit on October 15, 1974, as Order No. 74-110. That permit was later modified by Order Nos. 77-40 and 77-41, adopted on May 17, 1977.
3. The discharger presently discharges the following wastes:
  - a. Waste No. 001 consists of 1.0 million gallons per day (mgd) average annual flow of municipal wastewater containing pollutants and is discharged to Suisun Bay, a water of the United States, at the shore adjacent to the treatment plant at Port Chicago Highway near Wharf Drive in West Pittsburg.
  - b. Waste 002 is digested sludge from the treatment plant and is discharged into an existing drying bed called Land Disposal Site L-1 below. The sludge is dried by evaporation without percolation. After drying, the sludge is removed to the County Rehabilitation Center where it is used as a soil conditioner.
4. The discharger is included in the recently expanded Contra Costa County Sanitation District No. 7-A, formerly called the East/Central Contra Costa County Wastewater Management Agency.
5. A Water Quality Control Plan for the San Francisco Bay Basin was adopted by the Board in April 1975. The Basin Plan contains water quality objectives for Suisun Bay.

6. The beneficial uses of Suisun Bay and contiguous water bodies are:
  - a. Recreation
  - b. Fish migration, spawning, and habitat
  - c. Habitat and resting for waterfowl, and migratory birds
  - d. Industrial and municipal water supply
  - e. Esthetic enjoyment
  - f. Navigation
  - g. Commercial fishery
  - h. Habitat for wildlife including some rare and endangered species.
7. Effluent limitations and toxic and pretreatment effluent standards established pursuant to Section 208b, 301, 304, and 307 of the Federal Water Pollution Control Act are applicable to the discharge.
8. Order No. 77-40 required the discharger to submit a study of alternatives for dechlorination and for BOD and suspended solids removal by August 15, 1977, and a compliance time schedule for these improvements by September 15, 1977. The discharger completed the study and has requested relief from the 50% removal requirement for BOD. Removals of greater than 50% are feasible for suspended solids.
9. Since the issuance of Order No. 77-41 which established a compliance time schedule for secondary treatment, design delays have occurred such that the completion schedule for the subregional treatment plant has been altered.
10. The discharger has requested an extension of the compliance time schedule pursuant to Section 301 (i) (1) of the Clean Water Act of 1977.
11. This project involves the continued operation of a publicly-owned facility to provide sewerage service with negligible or no expansion of use beyond that previously existing. Consequently, this project will not have a significant effect on the environment based upon the exemption provided in Section 15101, Title 14, California Administrative Code.
12. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the proposed discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
13. The Board in a public meeting heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, Contra Costa County Sanitation District No. 7-A in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Federal Water Pollution Control Act, and regulations and guidelines adopted thereunder shall comply with the following:

A. Effluent Limitations

1. The discharge of Waste 001 in excess of the following limits is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>30-Day Average</u>	<u>7-Day Average</u>	<u>Daily Maximum</u>	<u>Instantaneous Maximum</u>
a. Settleable Matter	ml/l/hr	0.1	--	--	0.2
b. BOD	mg/l	30	45	60	--
	lbs/day	520		1035	
	kg/day	235		470	
c. Suspended Solids	mg/l	30	45	60	--
	lbs/day	520		1035	
	kg/day	235		470	
d. Oil & Grease	mg/l	10		20	--
	lbs/day	172		344	
	kg/day	78		156	
e. Chlorine Residual	mg/l	--	--	--	0.0

2. The arithmetic mean of the gravimetric values for BOD and Suspended Solids effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of respective values for influent samples collected at approximately the same times, during the same period. (85 percent removal)
3. Prior to achievement of secondary treatment as required by the Federal Water Pollution Control Act, the following interim limitations shall apply:

a. Settleable Matter

The arithmetic average of  
any 6 or more samples  
collected on any day 0.5 ml/l/hr. maximum

80% of all individual  
samples collected during  
maximum daily flow over  
any 30-day period 0.4 ml/l/hr. maximum

Any sample 1.0 ml/l/hr. maximum

- b. The arithmetic mean of gravimetric values for BOD in effluent samples collected in a period of thirty (30) consecutive days shall not exceed seventy (70) percent of the arithmetic mean of respective values for influent samples collected at approximately the same times during the same period (i. e. thirty (30) percent removal).

c. The arithmetic mean of gravimetric values for suspended solids in effluent samples collected in a period of thirty (30) consecutive days shall not exceed forty (40) percent of the arithmetic mean of respective values for influent samples collected at approximately the same times during the same period (i.e. sixty (60) percent removal).

d. The total coliform bacteria for a median of five consecutive effluent samples shall not exceed 240 per 100 milliliters. Any single sample shall not exceed a most probable number (MPN) of 10,000 total coliform bacteria when verified by a repeat sample taken within 48 hours.

4. Representative samples of the effluent shall not exceed the following limits more than the percentage of time indicated: <sup>(a)</sup>

<u>Constituent</u>	<u>Unit of Measurement</u>	<u>50% of time</u>	<u>10% of time</u>
Arsenic	mg/l (kg/day)	0.01 (.064)	0.02 (.129)
Cadmium	mg/l (kg/day)	0.02 (.129)	0.03 (.193)
Total Chromium	mg/l (kg/day)	0.005 (.032)	0.01 (.064)
Copper	mg/l (kg/day)	0.2 (1.29)	0.3 (1.93)
Lead	mg/l (kg/day)	0.1 (.64)	0.2 (1.29)
Mercury	mg/l (kg/day)	0.001 (.0064)	0.002 (.0129)
Nickel	mg/l (kg/day)	0.1 (.64)	0.2 (1.29)
Silver	mg/l (kg/day)	0.02 (.129)	0.04 (.257)
Zinc	mg/l (kg/day)	0.3 (1.93)	0.5 (3.22)
Cyanide	mg/l (kg/day)	0.1 (.64)	0.2 (1.29)
Phenolic Compounds	mg/l (kg/day)	0.5 (3.22)	1.0 (6.43)
Total Identifiable			
Chlorinated Hydrocarbons	mg/l (kg/day) <sup>(b)</sup>	0.002 (.0129)	0.004 (.026)

(a) These limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards.

(b) Total identifiable chlorinated hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

5. The total coliform bacteria for a median of five consecutive effluent samples shall not exceed 23 per 100 milliliters. Any single sample shall not exceed a most probable number (MPN) of 500 total coliform bacteria when verified by a repeat sample taken within 48 hours.
6. The discharge shall not have a pH of less than 6.5 nor greater than 8.5.

7. In any representative set of samples the waste as discharged shall meet the following limit of quality:

TOXICITY: The survival of acceptable test organisms in 96 hour bioassays of the effluent shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

B. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
  - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
  - b. Bottom deposits or aquatic growths;
  - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
  - d. Visible, floating, suspended or deposited oil or other products of petroleum origin;
  - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
  - a. Dissolved oxygen      5.0 mg/l minimum. Annual median ~ 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
  - b. Dissolved sulfide      0.1 mg/l maximum.
  - c. pH      Variation from natural ambient pH by more than 0.2 pH units.
  - d. Un-ionized ammonia      0.025 mg/l, Annual Median  
as N      0.4 mg/l, Maximum

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. Land Disposal Requirements

1. The discharge of Waste 002 shall not cause waste material to be in any position where it is, or can be, carried from Land Disposal Site "L-1" and deposited in waters of the State.
2. Land Disposal Site "L-1" shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the disposal site. Adequate protection is defined as protection from at least a 100-year storm, and from the highest tidal stage that may occur.
3. The disposal of Group 1 material as defined in the California Administrative Code, Article 3, Section 2520, in Land Disposal Site "L-1" is prohibited.

D. Discharge Prohibitions

1. Discharge at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited.
2. There shall be no bypass or overflow of untreated wastewater to waters of the State either at the treatment plant or from the collection system.
3. The average dry weather flow shall not exceed 1.2 mgd. Average shall be determined over three consecutive months each year.
4. The discharge of treated wastewater from the outfall channel to the adjacent marshland is prohibited.
5. The discharge of wastewater from the Shore Acres sewage treatment plant after May 1, 1981 is prohibited.

E. Provisions

1. The discharger shall comply with the following time schedules to assure compliance with specifications of this Order.
  - a. Compliance with Effluent Limitation A.4 shall be achieved by September 30, 1978.

- b. Compliance with Effluent Limitations A.1. (except A.1.e.), A.2., A.5., A.7; Receiving Water Limitations B.1.a., B.1.c., B.2.c., and B.2.d.; and Discharge Prohibitions D.1. and D.2.

<u>Task</u>	<u>Compliance Date</u>	<u>Report of Compliance Due</u>
(1) Status report on Completion of Plans and Specifications		August 15, 1978
(2) Submit complete Plans and Specifications for sub-regional plant	October 1, 1978	October 15, 1978
(3) Award construction contract for subregional treatment plant	April 1, 1979	April 15, 1979
(4) Status report I, on Construction		October 15, 1979
(5) Status report II, on Construction		March 15, 1980
(6) Status report III, on Construction		August 15, 1980
(7) Complete Construction	March 1, 1981	March 15, 1981
(8) Full Compliance	May 1, 1981	May 15, 1981

- c. Compliance with Effluent Limitation A.1.e. shall be achieved by April 1, 1979.

- d. The discharger shall comply with all effluent and receiving water limitations, prohibitions, and provisions of this Order immediately upon adoption unless otherwise scheduled herein.

2. The requirements prescribed by this Order amend the requirements prescribed by Order No. 71-42 adopted by the Board on June 24, 1971, and are effective on the dates of compliance prescribed in the above time schedule; PROVIDED HOWEVER, that the following requirements prescribed in Order No. 71-42 shall remain in effect until Cease and Desist Order No. 71-57 is rescinded by this Board:

Waste Discharge Requirements - Effluent 3.a, and 3.b pertaining to Settleable Matter and Coliform.

3. This Board's Order Nos. 74-110, 77-40, and 77-41 are hereby rescinded.

4. The discharger shall review and update annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willfull and negligent violation of this Order pursuant to Section 13387 of the California Water Code.
5. The discharger shall comply with the self-monitoring program as ordered by the Executive Officer.
6. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977, except B.3.
7. This order expires August 1, 1981.

This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on August 15, 1978.

FRED H. DIERKER  
Executive Officer

Attachments:

1. Standard Provisions, Reporting Requirements & Definitions 4/77
2. Self-Monitoring Program Part A&B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM  
FOR

Contra Costa County Sanitation District #7-A

---

---

NPDES NO. CA 0037940

ORDER NO. 78-69

CONSISTS OF

PART A, dated January 1978

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS AND SCHEDULE OF SAMPLING, ANALYSES, AND OBSERVATIONS

A. INFLUENT

<u>Station</u>	<u>Description</u>
A-1	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present and all treatment is complete.
E-001-D	At any point in the disinfection facilities for Waste 001, at which point adequate contact with the disinfectant is assured. (May be the same as E-001.)

C. RECEIVING WATERS

<u>Station</u>	<u>Description</u>
C-1	In Suisun Bay, in the area enclosed between shore and an arc connecting the locations of Stations C-2 through C-4.
C-2	At a point in Suisun Bay, located within 20 feet offshore, 50 feet westerly from the point of discharge.
C-3	At a point in Suisun Bay, located 50 feet offshore from the point of discharge.
C-4	At a point in Suisun Bay, located within 20 feet offshore, 50 feet easterly from the point of discharge.
C-5	At a point in Suisun Bay, located within the entrance to the marina under development, approximately 250 feet easterly from the point of discharge.
C-6	At a point in Suisun Bay, located 300 feet westerly from the point of discharge.

D. OVERFLOWS AND BYPASSES

<u>Station</u>	<u>Description</u>
O-1 thru O-"n"	Bypass or overflows from manholes, pump stations or collection system.

Note: Initial SMP report to include map and  
description of each known bypass or  
overflow location.

Reporting - Shall be submitted monthly and  
include date, time and period of  
each overflow or bypass.

E. LAND OBSERVATIONS

<u>Station</u>	<u>Description</u>
P-1 thru P-8	Located at the corners and mid-points of each segment of the perimeter fenceline surrounding the treatment facilities.
S-1 thru S-3	Located at points along the shoreline of Suisun Bay opposite Stations C-6, C-1 (outfall), and C-5, respectively.
L-1 thru L-"n"	Located along the perimeter levee of sludge disposal area at equidistant intervals not to exceed 50 feet. (A sketch showing the locations of these stations will accompany each report.)

I, Fred H. Dierker, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 78-69.
2. Does not include the following paragraphs of Part A:  
  
C-3 and C-4.
3. Has been ordered by the Executive Officer on August 15, 1978. and becomes effective immediately.
4. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

FRED H. DIERKER  
Executive Officer

Attachment:  
Table I

**TABLE I**  
**SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS**

Sampling Station	A	E-001		E-001-D			O	All C	P, S & L				
TYPE OF SAMPLE	C-24	G	C-24	Cont	G	C-24	O	G	O				
Flow Rate (mgd)			D										
BOD, 5-day, 20° C, or COD (mg/l & kg/day)	W		W										
Chlorine Residual & Dosage (mg/l & kg/day)				Cont or	2/D								
Settleable Matter (ml/1-hr. & cu. ft./day)		D											
Total Suspended Matter (mg/l & kg/day)	W		W										
Oil & Grease (mg/l & kg/day)	M <sup>(1)</sup>		M <sup>(1)</sup>										
Coliform (Total) (MPN/100 ml) per req't					3/W								
Fish Toxicity, 96-hr. TL <sub>50</sub> % Survival in undiluted waste						M							
Ammonia Nitrogen (mg/l & kg/day)													
Nitrate Nitrogen (mg/l & kg/day)													
Nitrite Nitrogen (mg/l & kg/day)													
Total Organic Nitrogen (mg/l & kg/day)													
Total Phosphate (mg/l & kg/day)													
Turbidity (Jackson Turbidity Units)								M					
pH (units)		D						M					
Dissolved Oxygen (mg/l and % Saturation)		D						M					
Temperature (°C)		D						M					
Apparent Color (color units)								M					
Secchi Disc (inches)								M					
Sulfides (if DO < 5.0 mg/l) Total & Dissolved (mg/l)		W						M					
Arsenic (mg/l & kg/day)			Y										
Cadmium (mg/l & kg/day)			Y										
Chromium, Total (mg/l & kg/day)			Y										
Copper (mg/l & kg/day)			Y										
Cyanide (mg/l & kg/day)			Y										
Silver (mg/l & kg/day)			Y										
Lead (mg/l & kg/day)			Y										

**TABLE I (continued)**  
**SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS**

Sampling Station	A	E-001		E-001-D			O	All C	P, S & L				
TYPE OF SAMPLE	C-24	G	C-24	Cont	G	C-24	O	G	O				
Mercury (mg/l & kg/day)			Y										
Nickel (mg/l & kg/day)			Y										
Zinc (mg/l & kg/day)			Y										
PHENOLIC COMPOUNDS (mg/l & kg/day)			Y										
All Applicable Standard Observations		D					E	M	W				
Bottom Sediment Analyses and Observations													
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day)			Y										
Un-ionized Ammonium Hydroxide (mg/l)								M					

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample  
C-24 = composite sample - 24-hour

Cont = continuous sampling

O = observation

FREQUENCY OF SAMPLING

E = each occurrence

D = once each day

W = once each week

M = once each month

Y = once each year

TYPES OF STATIONS

A = treatment facility influent stations

E = waste effluent stations

C = receiving water stations

P = treatment facilities perimeter stations

L = basin and/or pond levee stations

O = overflow stations

Cont = continuous

FOOTNOTES FOR TABLE I

- (1) Oil and grease sampling shall consist of 3 grab samples taken at equal intervals during the sampling day, with each grab being collected in a glass container. The grab samples shall be mixed in proportion to the instantaneous flow rates occurring at the time of each grab sample, within an accuracy of plus or minus 5%. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the composite wastewater sample for extraction and analysis.